

## REMARKS

### Status of the Claims

The pending office action addresses claims 21, 22, 24-27, 30-32, and 40-44. Claims 21, 22, 24-27, 30-32, and 40-44 stand rejected with claims 21 and 41 being independent claims. By this response, Applicants have amended claims 21, 40 and 41.

### Claim Objections

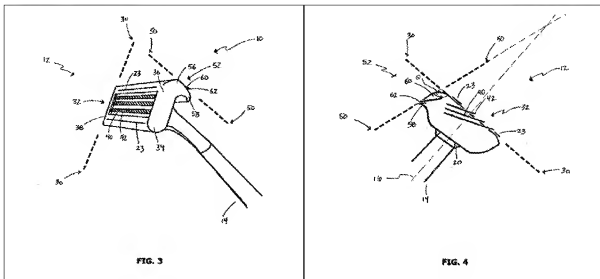
The Examiner has objected to claims 21 and 41 based on the following informalities:

On lines 11-12 of claim 21, the phrase "at least one razor blade in the first blade group" should be replaced with "at least one razor blade in the second blade group". On lines 11-12 of claim 41, the phrase "at least one razor blade being provided at an acute angle to the first working plane" should be replaced with "at least one razor blade being provided at an acute angle to the second working plane". On the last 2 lines of claim 41, the phrase "the distance between the cutting blade and the individual's skin to be minimized to facilitate shaving in confined hard-to-reach areas of the face" should be replaced with "a distance between the at least one razor blade and an individual's skin to be minimized to facilitate shaving in confined hard-to-reach areas of the individual's skin"

Applicant has amended claims 21 and 41 according to the Examiner's suggestions.

### The Working Planes and Angles

As has been repeatedly noted, the geometry of the claimed razor system is critical to its success as a trimming and shaving device. In particular, the angle between the working planes is a further critical aspect of this geometry. Applicant has used the angle between these working planes to clearly distinguish the cited Rozenkranc reference. The Examiner has not disputed that Rozenkranc does not disclose Applicant's invention, particularly as illustrated in Figures 3 and 4 of the application.



Instead, the Examiner takes the position that the working planes are not defined – “since the actual location of the *second working plane is not defined, it could be any plane . . .*,” “[s]ince the second plane could be anywhere, it is clear that the angle of intersection could be within the claimed range;” “[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to have made the plane intersection angle between about 75° and 135° *due to the fact an exact location of the second working plane is not disclosed.*”

In addition, the Examiner asserts that the angle between the first and second working planes is not defined: “the first and second planes for 4 angles when they intersect . . .”

Reading the claims in light of the specification of which they are part – there can be no legitimate dispute about where the second working plane is or what the angle between the first and second working planes is. In the Background, in paragraph 15, the application defines a “working plane” for a modern razor:

[0015] More specifically, a modern conventional razor cartridge typically has a blade platform or seat having formed thereon a guard bar for smoothing the skin adjacent to the cutting edge or edges of the razor blade during shaving. . . . **The guard and back portions define parallel opposite lengthwise edges of the platform member. As such, they define a single “working plane” which bears against the skin and controls the angle and distance at which the sharpened edges of the blades are allowed to bear against a section of the skin to be shaved as the blade is moved across the skin.**

It is clear that the “second working plane” cannot “be anywhere.” It is where it is defined to be. It is also worth noting that it is not any particular configuration of glide surfaces that is intended by the recitations in the amended claims, but they are included merely to flesh out this functional description of the working plane from the specification. They define the plane of the platform that bears against the skin, to which the blades are then presented at an acute angle.

In the context of the present invention, the working planes are defined in the same way in paragraphs 84 and 85:

[0084] More specifically, the razor head or cartridge of the exemplary embodiments of the present invention comprises a primary group of blades comprising two or more substantially parallel strip-like razor blades on a **primary front face or front working plane**, wherein the two or more parallel strip-like razor blades are positioned closely to one another. The primary group of blades is preferably encased in the razor head or cartridge in a manner providing a **fixed orientation of the blades to the skin through leading and trailing and glide surfaces which define the front working plane of the razor head**. These various surfaces of the primary front face or front working plane bear against skin being shaved, and therein substantially ensure the sharpened edges of the blade strips are presented at the substantially proper angle to the skin being shaved.

[0085] The razor head or cartridge additionally comprises a secondary blade group comprising one or more strip-like razor blades on a **secondary face or a second working plane** positioned on the top or top-back edge of the razor head. The secondary blade group is encased in or fused to the razor head or cartridge in a manner providing a fixed orientation of the blade to the skin through the use of **thin-profile leading and trailing glide surfaces which define a second working plane of the razor head**. These various surfaces of the secondary face or second working plane bear against the skin being shaved, and thus substantially ensure the sharpened edges of the blade strip is presented at the substantially proper angle to skin being shaved. A handle extends from the head of the razor.

Again, it is perfectly clear that the “second working plane” cannot “be anywhere.” It is where it is defined to be, and the definitions are consistent throughout the Background, the Detailed Description, and the Figures.

The definition of the working planes is made even more further clear by their description with respect to the numbered elements in the Figures:

[0103] FIG. 2 illustrates a top perspective view of razor 10 indicating the relative positions, in exploded fashion, of the primary blade group 32 of the primary working plane 30 and the secondary blade group 52 of the secondary working plane 50 on the razor head cartridge 12. **The secondary blade group 52 comprising the secondary working plane 50 is constructed of a blade platform 54, a guard bar 58, and one or more elongated razor blade strips 60, each strip comprising a cutting edge 62, and a cap 56, all fused, cemented or otherwise bonded together.**

[0104] The primary blade group 32 comprising **the primary working plane 30 is comprised of a blade platform 34, a guard bar 38, one or more elongated razor blade strips 40** (not shown), and a cap 36, all fused, cemented or otherwise bonded together. The secondary blade group 52 is attached, fused, cemented or otherwise bonded, along a top-back edge 24, to the primary blade group 32 comprising the primary working plane 30 to preferably create an permanent, integrated one-piece razor head 12 having two separate and distinct blade groups, 32 and 52. The composite razor head cartridge 12 is attached permanently or replaceably to the handle 14 via a connection between the clip 22 on handle 14 and a channel 20 located on the back side of razor head cartridge 12. Together, these elements comprise the razor system 10 of an exemplary embodiment of the present invention.

The working planes are completely defined.

Despite the fact that the working planes are clearly defined so that no reasonable interpretation of the claim language could lead to their being “anywhere,” Applicant, in an attempt to expedite prosecution and with no waiver intended, amends claim 21 to further expressly recite in the claims the elements that define the working planes. The primary working plane is defined by a blade platform 34 having leading and trailing glide surfaces, which, in the preferred embodiment, are provided by the guard 38 and cap 36, respectively. The secondary working plane is defined by a blade platform 54 having leading and trailing glide surfaces, which, in the preferred embodiment, are provided by the guard 58 and cap 56, respectively. The Background is in accord with the Detailed Description, which is in accord with the Figures, which are in accord with the claims – and the working planes are fully defined and cannot “be anywhere.”

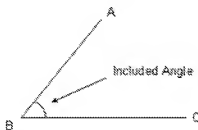
The second definitional issue raised by the Examiner relates to the angle defined by the intersection of the first and second working planes. The Examiner asserts that there are four

such angles. The claim language makes clear in defining the claims which angle is relevant, and Figure 4, illustrating that angle “theta”, makes crystal clear which angle of the Examiner’s four is intended, it is the “included angle” defined by the planes that are in turn defined on the head of the razor. The following definition of included angle (taken from [www.mathopenref.com/angleincluded.html](http://www.mathopenref.com/angleincluded.html)) matches exactly the illustration in Figure 4, showing that the Figure does indicate “theta” as the included angle:

#### included angle

From Latin; *includere* “to shut in, enclose”

*Definition: The angle made by two lines with a common vertex*



When two lines meet at a common point (vertex) the angle between them is called the included angle. The two lines define the angle. So for example in the figure above we could refer to the angle  $\angle ABC$  as the “included angle of BA and BC”.

Or we could refer to “BA and BC and their included angle”.

See also Included side

Accordingly, Applicant has amended claim 21 to identify the measured angle as the “included angle” as it is shown and described in the specification.

#### **Claim Rejections - 35 USC §102/103**

The Examiner has rejected claims 21 (and claim 40), 22, 24-27, and 30-32 under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Rozenkranc (U.S. 6,276,061).

#### **Claims 21 and 40:**

Specifically with regards to claims 21 and 40, the Examiner states:

In regards to claims 21 and 40, Rozenkranc discloses the same invention including a razor cartridge (2) for use

with a handle (1), the razor cartridge defines a handle axis (Fig. 2), a first blade group (3) provided on the razor cartridge and having a plurality of blades configured to provide a broad area shaving in a first working plane (T), the first working plane intersects the handle axis (Fig. 2) and the plurality of blades in the first blade group are angled at an acute angle with respect to the first working plane (3 and T), a second blade group provided on the razor cartridge and having at least one razor blade (4) configured to provide trim shaving in a second work plane (U), the second working plane intersects the handle axis (Fig. 2) and the at least one razor blade in the second group is angled at an acute angle with respect to the second working plane (4 and U), and the first and second working planes intersect each other so as to define a line of intersection that is substantially transverse to the handle axis (Fig. 2), and the first and second working planes intersect at an angle between about 75° and 135° (since the actual location of the second working plane is not defined, it could be any plane that is acute to the razor blade of the second group. In Appendix A, the intersections of planes U and T form angles W and Y. Angle Y is about 75° and angle W is about 135°. **Since the second plane could be anywhere, it is clear that the angle of intersection could be within the claimed range.** Also, using Appendix B, the angle in the Figure has been re-drawn with the bottom arrow (BA) is flush with a plane that incorporates the tips of blades 3 and the other arrow (TA) is extended through blade 4 and still represents a plane acute with blade 4. This angle represents a range that anticipates the claimed range).

It is not the case that “the second plane could be anywhere.” Both the second plane and the angle measured are precisely defined. Applicant had previously further defined the working planes as suggested by the Examiner in the previous Interview, and as the Examiner has found that definition insufficient to prevent the second plane from being “anywhere,” Applicant has further defined the working planes in an effort to make their location precisely known.

Given this further definition of the relationship between the working planes in claim 21, Applicant's prior arguments regarding distinguishing over the geometry of Rozenkranc become even stronger. Claim 21 recites the preferred angle between the working planes of between about 75 degrees and 135 degrees. This feature is described in the application, for example, in paragraphs 15, 84, 85, 105 and 106 (as published), and can perhaps best be viewed by reference to Figure 4 of the application reproduced below in which element 30 is the first working plane and element 50 is the second working plane:

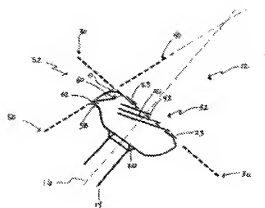
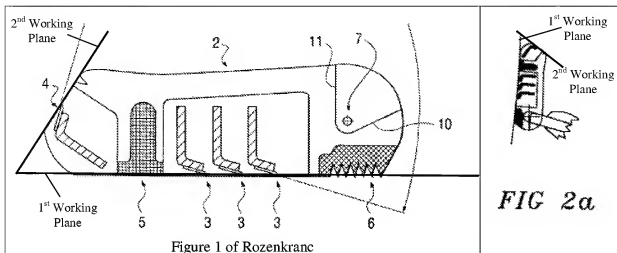


FIG. 4

As explained in the application in paragraph 106 (as published), the recited geometry results a razor that is more comfortable to use for both broad area shaving and trimming when the handle is rotated 180 degrees.

Turning again to Rozenkranc, applicant reproduce below Figures 1 and 2A from the Rozenkranc patent and highlight the first and second working planes in the Rozenkranc Figures:



A review of these Figures shows that the angle between the first and second working planes in Rozenkranc is well outside the recited range of between about 75 and 135 degrees. In fact, Applicant's measurement of this angle in Rozenkranc shows that it is less than 60 degrees (approximately 58 degrees). Further, Rozenkranc suggests no variation in the angle between the working planes and never recognizes its importance. Applicant's claimed geometry allows for more comfortable use of the claimed razor than does the geometry disclosed by Rozenkranc. In fact, it appears that Rozenkranc must allow his razor to rotate through large angles with respect to the handle (see, for example, the difference in angle between the razor and handle in Rozenkranc Figures 2 and 2A as compared to Rozenkranc Figures 3 and 3A; see also Rozenkranc Figure 4) in order to allow a transition from broad area to trim shaving.

The Examiner further rejects over Rozenkranc under 35 U.S.C. §103:

To the degree it can be argued that Rozenkranc does not anticipate first and second working planes intersect[ing] at an angle between about 75° and 135°[, it] would have been obvious to one having ordinary skill in the art at the time the invention was made to intersect the plane angles at an angle between about 75° and 135°, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been obvious to one of ordinary skill in the art at the time of the invention to have made the plane intersection angle



between about 75° and 135° due to the fact [that] an exact location of the second working plane is not disclosed.

First, as noted extensively above, the location of the second working plane is disclosed.

Further, Further, the reliance by the Examiner on *In re Aller* is inapt. As the MPEP (see MPEP § 2144.05 II. B. "Only Result-Effective Variables Can Be Optimized") notes:

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)

The Examiner does not refer to a result effective parameter, and Rozenkranc does not recognize or suggest that the angle between the working planes is result effective. Rather, Rozenkranc ignores the angle between the working planes and focuses his attention on the angle between the blades. Part of the inventiveness of Applicant's claimed invention is his recognition that carefully choosing the angle between the working planes would result in a razor that was easier to use and more effective for both shaving and trimming. There is no suggestion in the art or from any other source that this parameter would be result-effective.

Applicant has invented and claimed a better razor system that is not disclosed, taught or suggested by Rozenkranc. Accordingly, claim 21, as well as claim 40 which includes similar recitations, are patentable over Rozenkranc.

**Claim 41:**

Specifically with regards to claim 41, the Examiner states:

In regards to claim 41, Rozenkranc discloses the same invention including a razor system providing both broad area shaving and trim shaving blade groups within a single cartridge (2), an elongate handle defining a handle axis (1), the razor cartridge disposed on the handle (Fig. 2) having a first blade group having a plurality of blades configured to provide a broad area shaving in a first working plane (3), the first working plane (T) intersects the handle axis (Fig. 2) and the plurality of razor blades being provided at an acute angle to the first working plane (3 and T), a second blade group having at least one razor blade (4) configured to provide trim shaving in a second work plane (U), the second working plane intersects the handle axis (Fig. 2) and the at least one razor blade being

provided at an acute angle to the second working plane (4 and U), the first and second working planes intersect each other so as to define a line of intersection that is substantially transverse to the handle axis (Fig. 2), the first and second working planes intersect at an angle between about 0° and 150° (U and T, it is clear that the angle created by the intersection of U and T is acute and greater than 0° therefore it anticipates the limitation), the blade group includes a blade platform (50) and a leading-edge blade guard (51), the platform, guard, and the blade on the second working plane (Appendix A clearly shows that U travels through each item), the guard has a thin profile to allow a distance between the blade and the skin to be minimized to facilitate shaving (51).

**The Examiner also asserts:**

Using Appendix A item 51 is clearly thinner than item 6 therefore it incorporates a thin profile. The term "thin" is a relative term. Meaning it must be compared to another item to allow one to determine what "thin" means. Without a comparison (i.e. wall A is thinner than wall B) anything can be considered thin. Applicant is trying to argue that area of Rozenkranc incorporating blade 4 is broader than the area of the instant application incorporating blade 60 however, has not included any structural limitations into the claim preventing the examiner's interpretation of a thin profile. For example, an elephant is a big animal but a blue whale is a bigger animal, does that no longer allow one to consider the elephant a big animal. Without the comparison, the elephant and the blue whale are both big animals but with a comparison a blue whale is the big animal and the elephant is the smaller animal. The same thing goes with the term "thin". Applicant thin profile section may be thinner than the same section in Rozenkranc but without a structural comparison both can be considered thin.

In making this argument, the Examiner takes the term "thin profile" out of context from within the claim in which it is recited. The claim recites a "second blade group," where that second blade group includes at least one razor blade, a blade platform and a leading-edge blade guard. Then the leading-edge blade guard is said to have "a thin profile to allow the distance between the at least one razor blade and an individual's skin to be optimally minimized to facilitate shaving in confined hard-to-reach areas of the individual's skin." Placed in this context, the comparison is clear, the leading-edge blade guard must have a thin profile as within the second blade group. The purpose of providing the "thin profile" on the leading edge blade

group is to “allow the distance between the cutting blade and the individual’s skin to be optimally minimized to facilitate shaving in confined hard-to-reach areas of the face.”

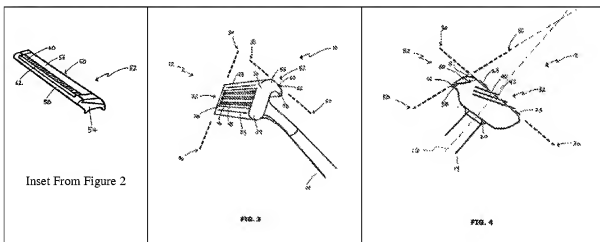
Thinness is recited in context – that is, with respect to the second blade group. The leading-edge blade guard has a thin profile with respect to the blade group within which it is found. Applicant’s representative sought to clarify the application of the term “thin profile” during the Interview. As discussed in the Interview, Applicant’s amended claim 41 in an attempt to clarify this relationship. Applicant finds this relative thinness to be perfectly clear – however, if the Examiner is looking for particular language, Applicant requests that the Examiner say so.

It is well established that, in the absence of a specific quantification of a parameter of an invention, the requirements of the parameter should be determined in light of the functional purpose of the invention, as expressed in the specification, In *Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, for example, the Federal Circuit was asked to construe the terms “lubricant” and “pre-lubricated” in the claims of the relevant patent. 976 F.2d 1559, 1565-67 (Fed. Cir. 1992). The background section of the patent described the problems in the prior art, *i.e.* the tackiness of a casting resin made molding a cast to a patient’s limb difficult, and the patent specification identified how the relevant invention overcame this problem by using lubricants to assist in the casting process. *Id.* at 1566. Although the specification did not quantify the amount of lubricant to be used in numeric terms, the court determined that the claimed term “lubricated” meant “sufficient” lubricant to serve the invention’s purpose. *Id.* at 1567 (“[t]he amount of lubrication required is laid out in the specification and should be sufficient to achieve the fundamental purpose of the invention – the ability to smooth and rub the casting materials during molding without the resin and tape sticking to the applicator’s hands”).

Similarly, in *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, the Federal Circuit adopted a functional definition, construing the term “smooth” as used in a patent claim for a contact lens. 796 F.2d 443 (Fed. Cir. 1986). The court looked to the patent specification and the prosecution history and found that “‘smooth’ meant that ‘the edges of the craters neither inflame nor irritate the eyelid of the lens wearer.’” *Id.* at 450. In rejecting the assertion that “‘smooth’ means absolutely ridge-free,” the Federal Circuit vacated the district court’s opinion that the lenses were not smooth because they did not appear smooth under a scanning electron

microscope. *Id.* at 450-51. The correct standard held by the Federal Circuit was that “smooth means smooth enough to serve the inventor’s purposes, i.e., not to inflame or irritate the eyelid of the wearer or be perceived by him at all when in place.” *Id.* at 450. *See also Laitram Corp. v. Cambridge Wire Cloth Co.*, 863 F.2d 855, 858 (Fed. Cir. 1988) (defining “slightly greater” spacing in terms of its purpose to “minimize bending and maximize shear” as described in the patent prosecution history); *Trinity Ind., Inc. v. Road Sys., Inc.*, 121 F.Supp.2<sup>nd</sup> 1028, 1045 (E.D. Tex. 2000) (“‘flattening’ means a degree of flattening sufficient to dissipate some of the energy of an impacting vehicle” where “the function of the squeezing extruder throat is to employ flattening to dissipate some of the energy of an impacting vehicle.”

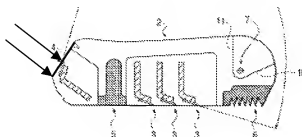
Here, in addition to having the function expressly described in the claim, this feature is further described in the application, for example, at paragraphs 85 and 93 (as published). This feature is also illustrated in Figures 2, 3 and 4 of the application, where element 58 is the leading-edge blade guard:



Giving the leading-edge blade guard 58 a thin profile allows the trim blade to be placed forward in the second working plane, thereby improving its trimming ability. As can be seen in these and other figures in the application, this thin profile for the leading edge blade guard for the second blade group results in the leading edge of the second working plane – the distance between the cutting blade and the individual’s skin – being optimally minimized so that the blade can be maneuvered readily into confined hard-to-reach areas.

In sharp contrast, Rozenkranc provides a broad second working plane and places the trimming blade on the back half of the plane, leaving more than one half of that plane to act as a

guard, which will in turn prevent the use of that blade to trim in confined hard-to-reach areas. To illustrate this point, Applicant has modified Figure 1 of Rozenkranc below to provide a darkened line to indicate the second working plane, and arrows to indicate its leading and trailing edges as well as the location of the cutting edge in that plane:



The broad blade guard area from the trim blade 4 to the leading edge of the second working plane in Rozenkranc stands in sharp contrast to the thin profile guard 58 provided in Applicant's Figure 4 and other Figures in the application.

Rozenkranc provides no disclosure, teaching or suggestion of a thin profile leading edge blade guard for the trim blade group as recited in Applicant's claim 41. Accordingly, this claim is patentable over Rozenkranc.

**CONCLUSION**

If the Examiner believes that an interview would facilitate the resolution of any outstanding issues, he is kindly requested to contact the undersigned.

In the event that a petition for an extension of time is required to be submitted at this time, Applicant hereby petitions under 37 CFR 1.136(a) for an extension of time for as many months as are required to ensure that the above-identified application does not become abandoned.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 141449, under Order No. 105428-2.

Dated: September 18, 2007

Respectfully submitted,



By

Ronald E. Cahill  
Registration No.: 38,403  
NUTTER MCCLENNEN & FISH LLP  
World Trade Center West  
155 Seaport Boulevard  
Boston, Massachusetts 02210-2604  
(617) 439-2000  
(617) 310-9000 (Fax)  
Attorney for Applicant